# TotalEnergies Upstream Companies in Nigeria (TUCN) Large Scale Exercise

## "Operation Stingray": An Industry First Capping Device Deployment

Operation Stingray was a Large-Scale Exercise carried out by TUCN on March 27, 2019 to test the robustness of TotalEnergies Upstream Company of Nigeria's complimentary Emergency and Crisis Management Plans. This was specifically in relation to the logistics chain for mobilisation and deployment of a capping device; Subsea Emergency Response System (SERS) and Subsea Dispersant System (SDS) located in Congo and Aberdeen respectively.

Operation Stingray was the first ever simultaneous deployment and testing of the *Subsea Emergency Response System* and Subsea Dispersant System in an actual deep-water environment.

The main purpose of the SERS and SDS Deepwater Trial is to simulate TUPNI's ability to respond to a deep water well blowout scenario that requires the use of the SERS equipment to identify any lapses, collate lessons learnt and anticipate further needs in the event of a real incident scenario. Also, to perform the full testing of the SERS equipment in a deep-water environment.

This is the first time that TotalEnergies will deploy SERS or any capping device in Nigeria or elsewhere. A comparable operation was conducted by TEP Angola at the 2013 LULA exercise when they deployed the SDS. However, this is the first time a complex operation of deploying both the SDS and the SERS capping device concurrently has been conducted within the Group or by an IOC. This operation was carried out to:

- Confirm and prove timeline, procedures, program, coordination, personnel, extra equipment requirement…etc.
- Confirm and define vessel integration requirements and scope
- Also, to simulate the subsea application of dispersant at a wellhead as an integral part of capping operations to create safer surface working conditions for response personnel and to enhance the dispersion of the hydrocarbon.

This exercise was driven by the impact of the 2010 Macondo well blow-out incident and the need to test the robustness and provide assurance of TUCN's Emergency and Crisis Management Plans in relation to the logistics chain for mobilisation and deployment of a SERS capping device and SDS, located in Congo and Aberdeen respectively.

The SERS project is an initiative of TotalEnergies to address the need for deep-water wells style diverter and dynamic kill system (DDKS). The SERS and SDS were deployed from an Offshore Inspection Maintenance & Repair (OIMR) vessel onto an abandoned deep water well for simulation and were effectively controlled from the OIMR vessel.

The exercise provided an opportunity to practise interaction between all levels of TotalEnergies Upstream Company of Nigeria emergency and crisis organisations. Also activated and included in the interaction process were external agencies, contractor organisation, supply services, Oil Spill Response Limited (OSRL), and Nigeria regulatory authorities (NUPRC- formerly known as DPR, NAPIMS, NOSDRA, NIMASA e.tc) including TotalEnergies

Crisis Support Cell (CSC) in Paris. Other International Oil Companies (IOC) in Nigeria participated in the exercise as observers.

On the 27th of March 2019, for an estimated duration of nine hours the SERS and SDS were deployed on an abandoned well for simulation purposes. The site emergency coordination was managed from TUCN's Egina FPSO by the offshore installation Manager (OIM).

In addition to the SERS and SDS, the other resources deployed to ensure a well-coordinated incident management includes over-flight helicopters, offshore containment boom, in-field vessels, drifting tracking buoy OSCAR modelling software+ GIS. Other resources like regional response organisation – *Clean Nigeria Associate* (CNA), *Mutual Agreement Plan* (MAP), *West Africa Surveillance Platform* (WASP) aerial surveillance platform aircraft, OSRL, Oil Spill Support Cell (OSSC) formerly PARAPOL and *Centre de Recherche et d'experimentation sur les pollutions accidentelles des eaux* (CEDRE) were simulated.

The successful mobilization of the SERS and Dispersant system from Congo and Aberdeen respectively, integration of all the equipment on an OIMR vessel, deployment and testing in less than 3 weeks was possible due to the effort of a host of departments, entities and affiliates within TotalEnergies, our partner contractors, and the Nigerian and Congolese authorities.

The first subsea deployment of a capping stack by an IOC entailed a year's worth of extensive planning, communication with stakeholders and document preparation and review. Good job preparation, risk assessments and supervision were very key to operational success.

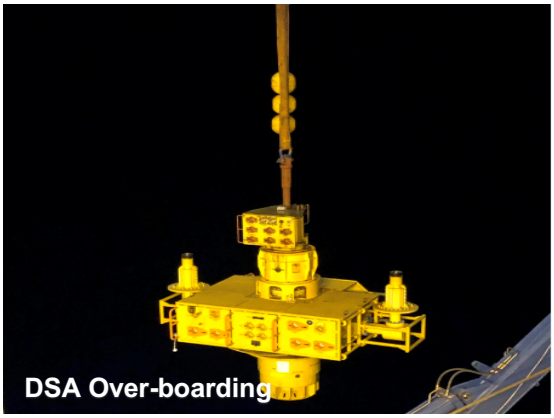
All the lessons learnt from the exercise have been captured and collated into a lesson learnt document which will form the basis for improving our processes, procedures and strategy for futures responses if ever required.

TotalEnergies commitment to ensuring its preparedness and capacity to respond to a blowout incident has been demonstrated and the exercise serves as a good example to our partners, authorities and the industry. More importantly, the Return on Experience (REX) of this exercise will continue to be a learning tool in an unlikely event of blowout.

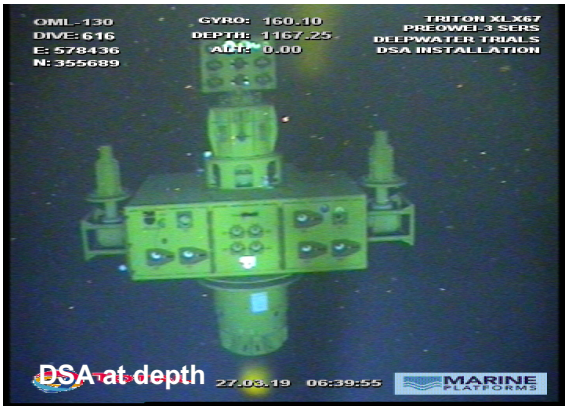
# PICTURES OF SERS PREPARATION & DEPLOYMENT

Diverter Spool Assembly (DSA) deck preparation

OIMR Vessel After Integration

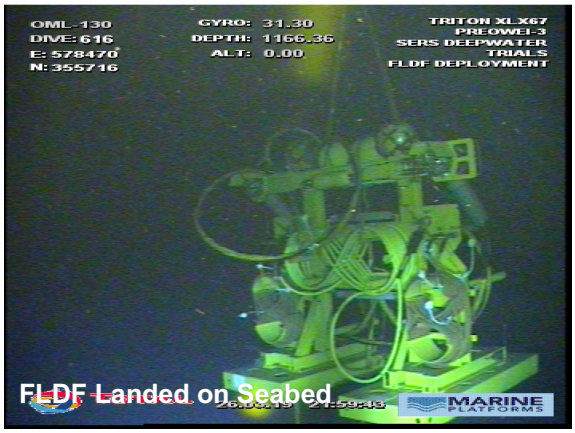


DSA Over-boarding

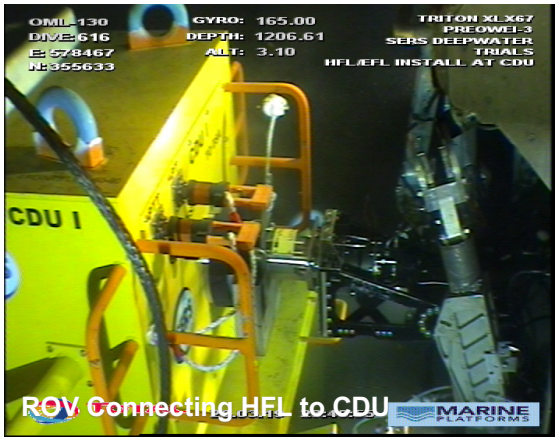



DSA at depth

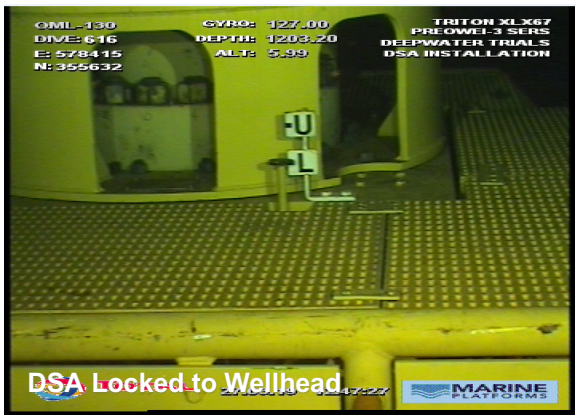

DSA Landing on Wellhead




FLDF Landed on Seabed



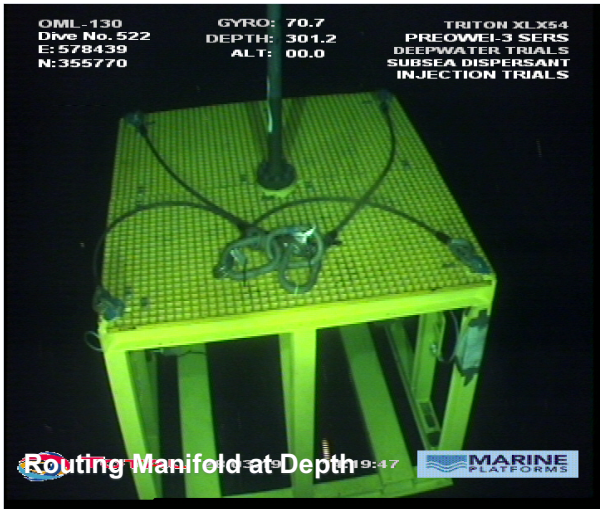

ROV Connecting HFL to CDU



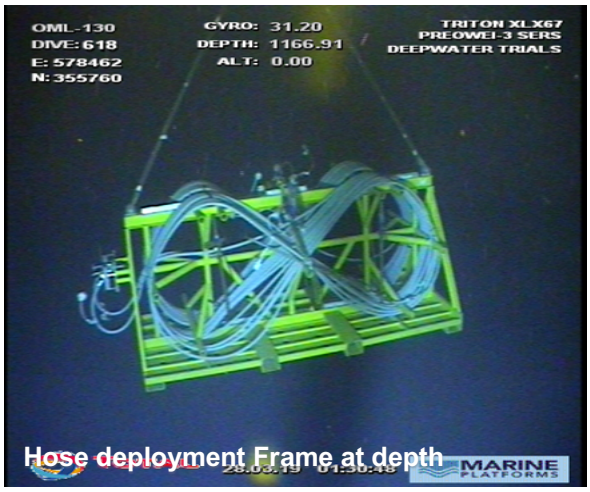

DSA Locked to Wellhead

# PICTURES OF SERS PREPARATION & DEPLOYMENT

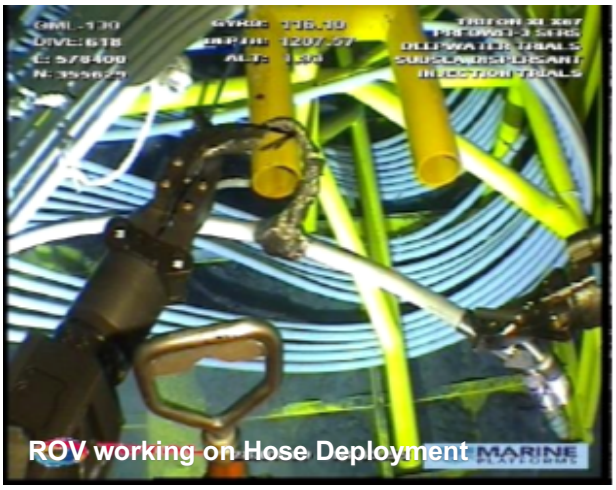
Routing Manifold Deployed



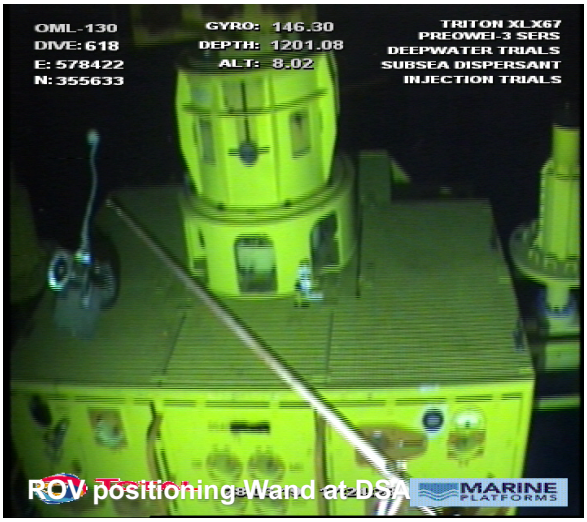

Routing Manifold at Depth



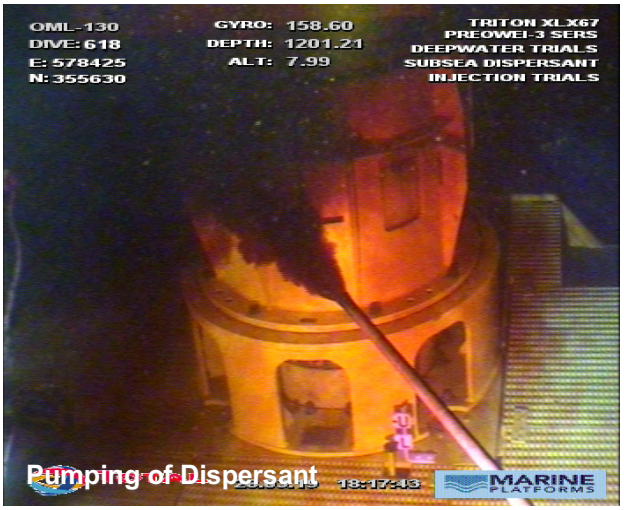

Hose deployment Frame at depth




ROV working on Hose Deployment




ROV positioning Wand at DSA




Pumping of Dispersant